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Fig. 1 Schematic Representation of the MOG Proteins

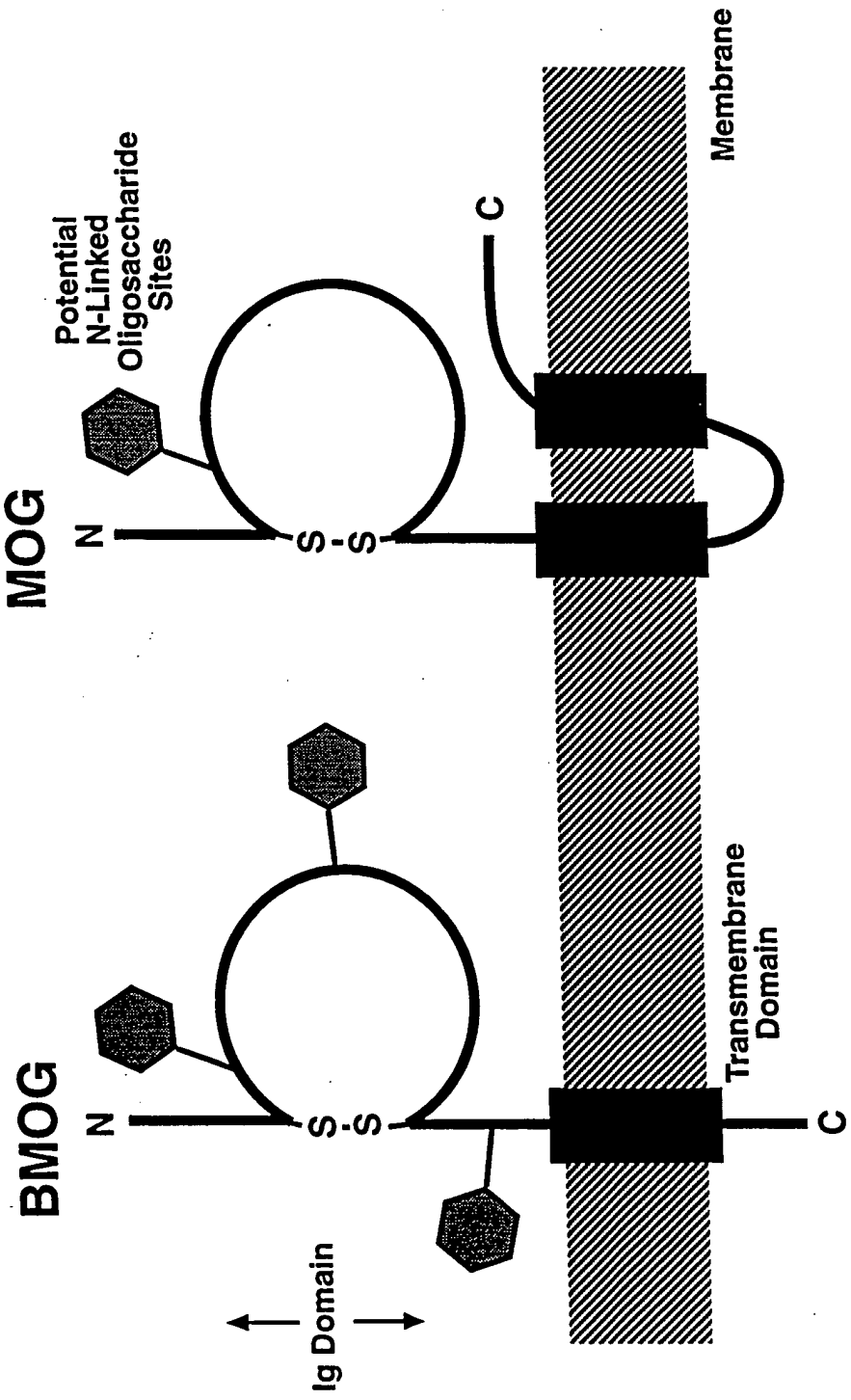

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Fig.2 Human BMOG Protein Structure

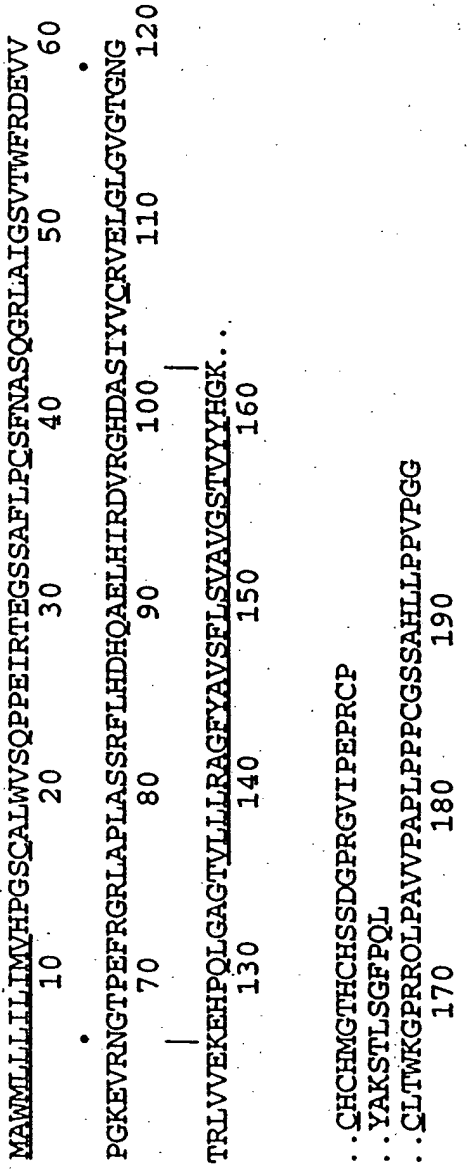

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Fig.3 **Alignment of the First Extracellular Ig Domain of BMOG, MOG, Butyrophilin, B-G and B7**

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hu-1C7                    MAWMLLLILIMVHPGSCAL-----WVSQPPEIRTLEGSSAFLPC----SFNASQGR
hu-MOG                 MASLSRPSLPSCLCSFLLLLLLQVSSSYAGQFRVIGPRHPIRALVGDEVELPCRI--SPGKNATG
rat-MOG                MAGVWSLSLPSCLLSLLLLL--QLSRSYAGQFRVIGPGHPIRALVGDEAELPCRI--SPGKNATG
mo-MOG                 MACLWSFSWPSCFLSLLLLLLLQLSCSYAGQFRVIGPGYPIRALVGDEAELPCRI--SPGKNATG
ch B-G     MAFTSGCNHPSFTLPWRTLLPYLVALHLLQPGSAQITVVAPSLRVT---AIVGQDVVLRCHL--SPCKDVRN
hu-Bu                  MASSLAFLLLNFHVSLLLVQLLTPC---SAQFSVLGPSGPILAMVGEDADLPCHL--FPTMSAET
bov-Bu                 MAVFPNSCLAGCLLIFILLQLPKLD---SAPFDVIGPPEPILAVVGEDAELPCRL--SPNVSAKG
hu-B7-1                   MGHTRRQGTSPSKCPYLNFFQLLVLAGLSHFCSGVIHVTKEVKEVATLSCGH-NVSVEELAQ
hu-B7-2                                  MGLSNILFVMAFLLSGAAPLKIQAYFNETADLPCQFANSQNQSLSE

hu-1C7     LAIGSVTWFR-DEVVPGKEVRNGT-------PEFRGRLAPLASSRFLHDHQAELHIRDVRGHDASIYVC
hu-MOG     MEVG---WYRPPFSRVVHLYRNGKDQDGDQAPEYRGR-TELLKDAIGEGKVT-LRIRNVRFSDEGGFTC
rat-MOG    MEVG---WYRSPFSRVVHLYRNGKDQDAEQAPEYRGR-TELLKESIGEGKVA-LRIQNVRFSDEGGYTC
mo-MOG     MEVG---WYRSPFSRVVHLYRNGKDQDAEQAPEYRGR-TELLKETISEGKVT-LRIQNVRFSDEGGYTC
ch B-G     SDIR---WIQQRSSRLVHHYRNGVDL--GQMEEYKGR-TELLRDGLSDGNLD-LRITAVTSSDSGSYSC
hu-Bu      MELK---WVSSSLRQVVNVYADGKEVEDRQSAPYRGR-TSILRDGITAGKAA-LRIHNVTASDSGQLEC
bov-Bu     MELR---WFREKVSPAVFVSREGQEQEGEEMAEYRGR-VSLVEDHIAEGSVA-VRIQEVKASDDGEYRC
hu-B7-1    TRIY---WQ-KEKKMVLTMM-SGDMN---IWPEYKNR-TIF--DITN---NLSIVILALRPSDEGTYEC
hu-B7-2    LVVF---WQ-DQENLVLNEVYLGKEKFDSVHSKYMGR-TSF--D-SD---SWTLRLHNLQIKDKGLYQC

hu-1C7     RVELGLGVGTGNGTRLVVEKEHPQLGAGTVLLLRAGFYAVSFLSVAVGSTVYY
hu-MOG     FFRDHSYQEEAAME-LKVEDPFYWVSPGVLVLLAVLPVLLLQITVGLVFLCL
rat-MOG    FFRDHSYQEEAAVE-LKVEDPFYWINPGVLALIALVPMLLLQVSVGLVFLFL
mo-MOG     FFRDHSYQEEAAME-LKVEDPFYWVNPGVLTLIALVPTILLQVSVGLVFLFL
hu-Bu      (second Ig domain) .....................
bov-Bu     (second Ig domain) .....................
hu-B7-1    (second Ig domain) .....................
hu-B7-2    (second Ig domain) .....................
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EV270263636US; Applicant: Jeffrey Browning; Attorney Docket No. A041 CON; Application No: 10/696,256 ; Filed: October 28, 2003; Group Art Unit: Not Yet Assigned; For: BMOG, A NOVEL PROTEIN MEMBER OF THE MYELIN-OLIGODENDROCYTE GLYCOPROTEIN FAMILY AND ITS USE FOR IMMUNOMODULATORY PURPOSES; Attorney: Kimberley A. Gavin (Reg. No. 51,723) Sheet 3 of 5

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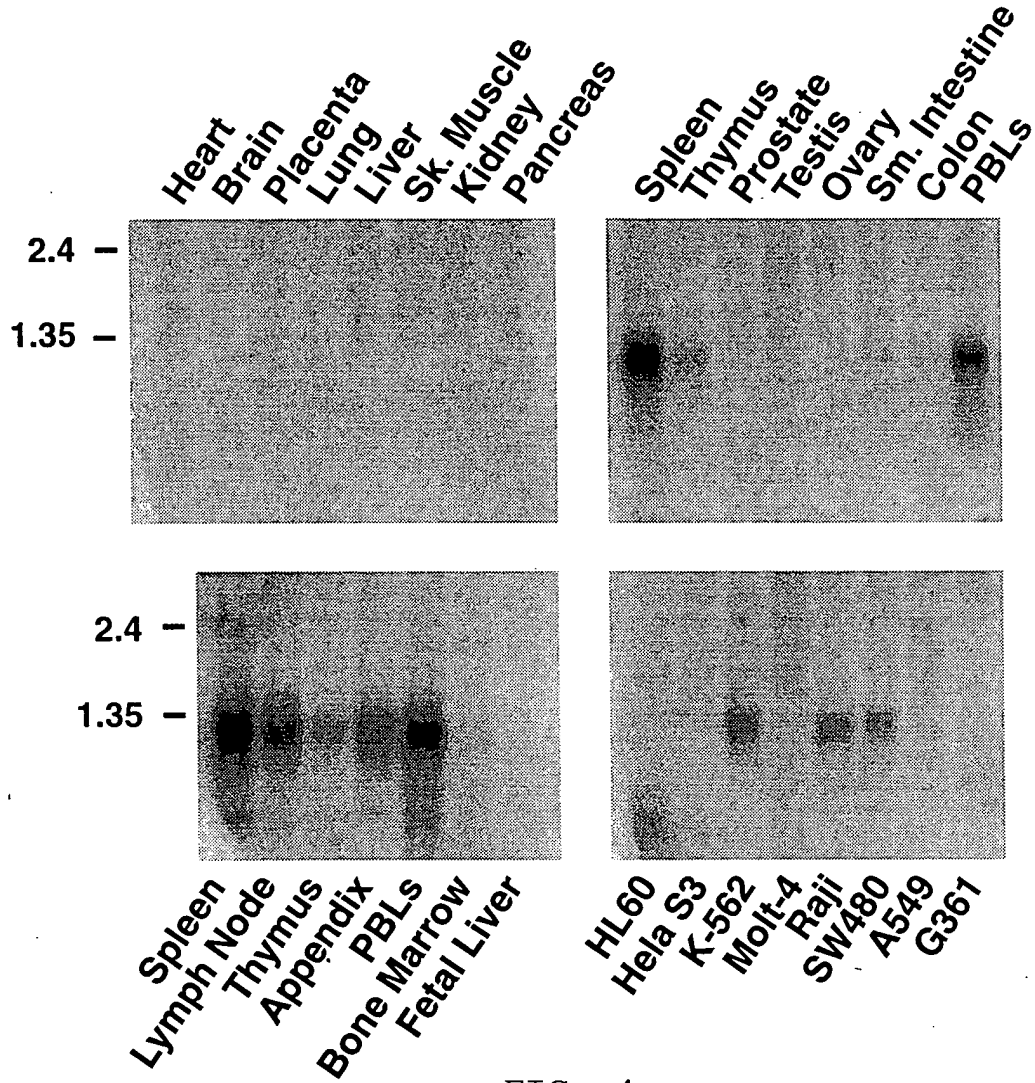

FIG. 4

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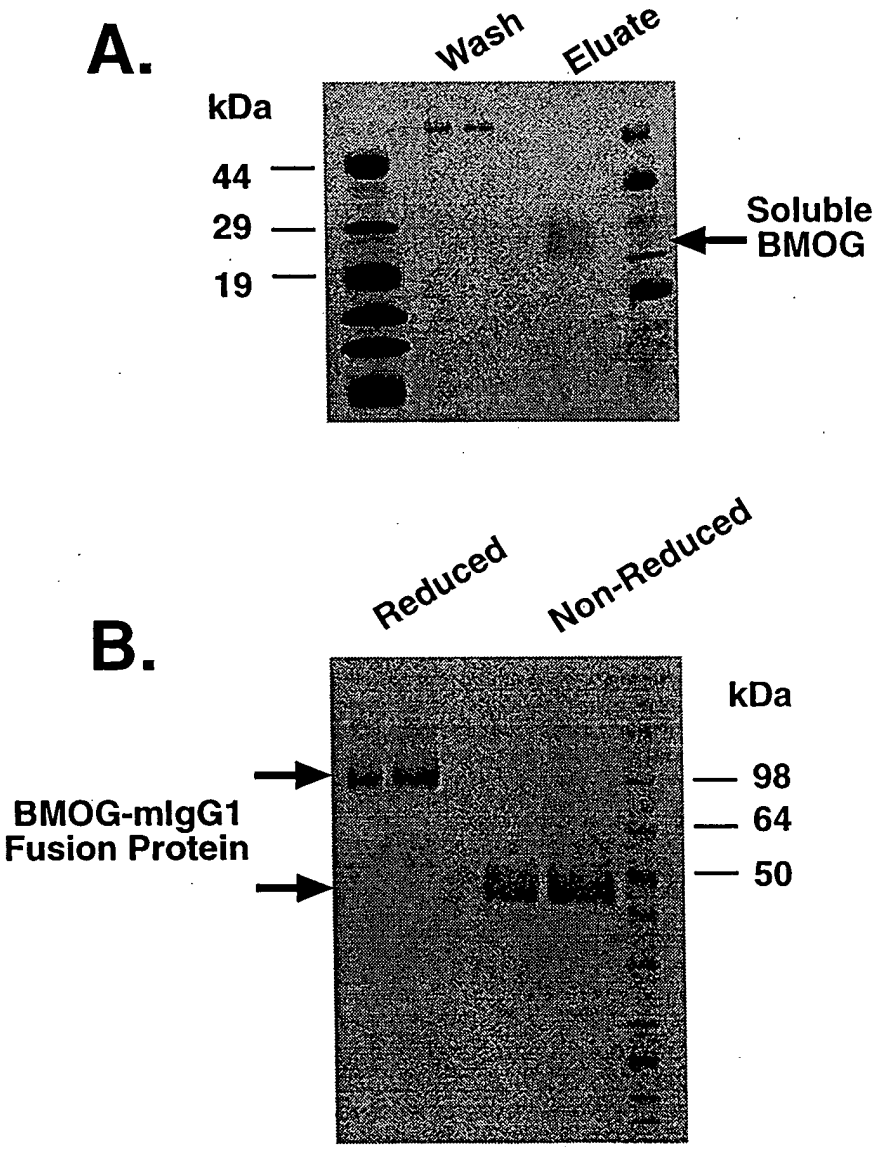

FIG. 5

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